



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,426	07/24/2000	David George Melville Cruickshank	CRUICKSHANK	1379

7590 09/23/2003  
Dann Dorfman Herrell & Skillman  
Suite 720  
1601 Market Street  
Philadelphia, PA 19103-2307

EXAMINER

QURESHI, AFSAR M

ART UNIT	PAPER NUMBER
----------	--------------

2667

DATE MAILED: 09/23/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/554,426

Applicant(s)

CRUICKSHANK ET AL.

Examiner

Afsar M Qureshi

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 July 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 6-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claims 6-9 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only and cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 6-9 have not been further treated on the merits.

### *Drawings*

2. Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

*Withdrawn  
new FOA*

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2667

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Blanchard et al. ('Blanchard' hereinafter), US 5,629,929.

Claims 1 and 10. Blanchard discloses a despreaders (communication terminal) comprising plurality of correlating means and zero padded Fast Fourier Transform (FFT) means for operating on the output of the correlating means (see figure 2 and 3, col. 3, lines 33-50).

Claim 2. The correlating means comprise a complex matched filter correlator (PMF) (see col. 5, lines 17-22).

Claim 3. Blanchard further discloses that the chip length and the number of correlator define the length of spreading size (see col. 5, lines 66 through col. 6, lines 1-27).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 5, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blanchard <sup>in view of</sup> and Grant et al. (XP-002102967).

Claim 4. Blanchard does not disclose the chip length of a correlator being 25 or less. However Grant et al. ('Grant' hereinafter) disclose the same on page 107, paragraph 3 [A specific example ... FFT bin outputs].

Claim 5. Grant discloses hard limiter at the input to the correlating means (see figure).

Claims 11 and 12. As can be seen from figure 2 (Grant – XP-002102967), the signal is being passed through a hard limiter prior to the correlation step. Blanchard further discloses a computing method in which maximum signal of the spreading sequence is selected to acquire the signal (see col. 4, lines 15-52).

Therefore it would have been obvious to one of ordinary skill to utilize the hard limiter at the input in the despreader in order to prevent the amplitude of an electronic waveform from exceeding a specific level and at the same time preserving the shape of the waveform.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rice (US 5,463,657) discloses a detector of a multiple-sequence spread spectrum signal to correlate a signal comprising two sequences with a plurality of candidate sequences.


Art Unit: 2667

Schilling et al. (US 5,553,062) disclose spread-spectrum CDMA interference canceller system for reducing interference in CDMA receiver having N chip-code channels.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afsar M Qureshi whose telephone number is (703) 308 8542. The examiner can normally be reached on Compressed (9 Hrs.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHI PHAM can be reached on (703) 305 4378. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305 4700.

  
Afsar M Qureshi  
Examiner  
Art Unit 2667